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09/871,176	05/31/2001	Andrew J.R. Smith	3499-120	9946

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LEE & HAYES, PLLC
421 W. RIVERSIDE AVE.
SUITE 500
SPOKANE, WA 99201

EXAMINER	
SURVILLO, OLEG	
ART UNIT	**PAPER NUMBER**
2142	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhpto@leehayes.com

Office Action Summary	Application No.	Applicant(s)	
	09/871,176	SMITH ET AL.	
	Examiner	Art Unit	
	Oleg Survillo	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/10/2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) *35-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09/28/2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/06/02,08/29/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-34, drawn to a method and system for processing information provided from at least one content provider about the state of a plurality of objects utilizing computer to computer data streaming, classified in class 709, subclass 231.

II. Claims 35-49, drawn to a system for processing raw data streams carrying a plurality of raw data objects containing information related to financial product offerings, classified in class 705, subclass 36R.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because it has a separate utility. The subcombination has separate utility such as processing raw data streams carrying a plurality of raw data objects containing information related to financial product offerings. Furthermore, the information manager on Invention I and information manager of Invention II have separate utility at least because the information managers of Inventions I and II perform different tasks. For example, the information manager of

Invention II comprises a translator configured to receive the raw data objects as input and generate raw events comprising a set of name-value pairs derived from data in the raw data objects.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Response to Arguments

1. Applicant's election with traverse of Invention I claims 1-34 in the reply filed on 11/10/2006 is acknowledged.

2. The traversal is on the ground(s) that a search of the claims of Invention I would arrive at art, if available, from the claims of Invention II. This is not found persuasive

because the restriction requirement was made on the grounds of Invention II having separate utility and different classification from Invention I. The restriction requirement did not argue that Inventions I and II require different field of search. The requirement is still deemed proper and is therefore made FINAL.

3. Claims 35-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected subject matter, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/10/2006.

4. With regard to the Applicants' remarks filed on 10/11/2006:

Applicant's amendment to page 4 line 6, page 26 line 9, page 27 line 10, and page 27 line 12 of the specification to correct typographical errors is acknowledged.

Applicant's amendment to claim 27 (incorrectly referred to in remarks as claim 26) to correct typographical errors is acknowledged.

Applicant's amendment to the specification to add a paragraph to page 1 as the first paragraph of the application is objected to. See explanation under the heading "Priority".

Priority

5. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 120 is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 09/608,526, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. In particular, Application No. 09/608,526, from which current application attempts to claim priority as a continuation application, has a completely different disclosure, inventive entity, and different assignee from the current application. In addition, there is no petition to accept an unintentionally delayed claim for the benefit of a prior-filed application, as specified in MPEP 1481.03 B(a)(3). As a result, priority claim under 35 U.S.C. 120 as a continuation of U.S. Patent Application No. 09/608,526, filed June 30, 2000 has been denied.

The applicant is required to cancel the benefit claim from the specification. See specification amendment filed 11/10/06. (AC)

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 1, Intranet (16'); Fig. 3, object type (74).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "24" has been used to designate both bi-directional flow of communications between host business services 22 and service manager 34 (page 8, line 16 of the disclosure, Fig. 1) and flow of communications between network 16 and clients 18 (Fig. 1).

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The disclosure is objected to because of the following informalities: page 8, line 16 word "subscribing" is misspelled, page 8, line 17 refers to clients 18 wherein it appears, based on Fig. 1, that it should refer to clients 18'.

Appropriate correction is required.

Claim Objections

Claim 26 is objected to because of the following informalities: word "further" is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 21 recite the limitation "the state" in the second line of the preamble. There is insufficient antecedent basis for this limitation in the claims.

3. Claim 12 recites the limitation "the initial state". There is insufficient antecedent basis for this limitation in the claim.

4. Claim 16 recites the limitation "the queued event" in the step of subsequently transmitting a client event. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 3, 4, 15, 18-19, 23, and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 3 and 23, it is ambiguous as it is unclear whether "the particular input data stream" that each respective client is subscribed to is the broadcast data stream. It appears that raw data stream input for receiving raw data objects can also be reasonably interpreted as the input data stream.

As to claim 4, it is ambiguous as it is unclear whether "broadcast data stream" is the same as "data broadcast stream".

As to claim 15, similar to claim 3, it is unclear whether "the new input data stream" is the new broadcast data stream of claim 14.

As to claim 18, it is unclear what "at 2 most one state event" means.

As to claims 19 and 34, it is ambiguous as it is unclear whether "the specific data" is the specific data object of claim 1 and claim 21 respectfully.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-34 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-35 of U.S. Patent No. 7,139,844 in view of U.S. Patent Application 09/871,427 (Pub. No.: US 2002/0046043 A1) claims 1-29.

Note: page and line references to claims in '844 Patent correspond to listing of claims as taken from the Response to Office Action Dated June 29, 2006 (copy of the claims is included with this Office Action). Page and line references to claims in '6043 Application correspond to listing of claims as originally filed (copy of claims is included with this Office Action).

Claim 1 is rejected over claim 16 of '844 Patent in view of claim 1 of '6043 Application.

As to claim 1, '844 Patent shows a method for delivering data objects containing data subject to periodic updates to a plurality of clients via a data communication network (preamble of claim 1). '844 Patent shows establishing communication sessions with a plurality of clients (claim 1, line 8), connecting to at least one broadcast data stream (claim 1, line 5) wherein input data stream is interpreted as broadcast data stream, receiving on a connected broadcast data stream a current state for a specific data object (claim 1, lines 11-12), updating an object pool cache to reflect the current state of the specific data object (claim 1, lines 13-14), transmitting the current state of the specific data object to a set of clients selected from the plurality of clients (claim 1, page 4, lines 1,4), and broadcasting the current state of the formatted data object on a particular broadcast data stream (preamble of claim 16).

'844 Patent does not show receiving raw data objects on at least one raw data stream input, generating a formatted data object from a received raw data object, and storing a current state of the formatted data object in an object storage pool.

'6043 Application shows receiving raw data objects on at least one raw data stream input (claim 1 line 3), generating a formatted data object from a received raw data object (claim 1 line 5), and storing a current state of the formatted data object in an object storage pool (claim 1 line 17).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the claim of '844 Patent by having an information manager of claim 16 perform the steps of receiving raw data objects on at least one raw data stream input, generating a formatted data object from a received raw data object, and storing a current state of the formatted data object in an object storage pool in order to broadcast data streams by at least one information manager (claim 16 in '844 Patent).

Claim 2 is rejected over claim 2 of '844 Patent in view of claim 1 of '6043 Application.

Claim 3 is rejected over claim 1 of '844 Patent.

Claim 4 is rejected over claim 16 of '844 Patent.

Claim 5 is rejected over claim 2 of '6043 Patent.

Claim 6 is rejected over claim 1 of '844 Patent in view of claim 5 of '6043 Application.

Claim 7 is rejected over claim 6 of '6043 Application.

Claim 8 is rejected over claim 1 of '844 Patent in view of claim 4 of '6043 Application.

Claim 9 is rejected over claim 7 of '6043 Application.

Claim 10 is rejected over claim 15 of '844 Patent.

Claim 11 is rejected over claim 3 of '844 Patent.

Claim 12 is rejected over claim 16 of '844 Patent.

Claim 13 is rejected over claim 4 of '844 Patent.

Claim 14 is rejected over claim 5 of '844 Patent.

Claim 15 is rejected over claim 6 of '844 Patent.

Claim 16 is rejected over claim 1 of '844 Patent.

Claim 17 is rejected over claim 1 lines 18-21 of '844 Patent.

Claim 18 is rejected over claim 11 of '844 Patent.

Claim 19 is rejected over claim 13 of '844 Patent.

Claim 20 is rejected over claim 14 of '844 Patent.

Claim 21 is rejected over claim 34 of '844 Patent in view of claim 1 line 17 of '6043 Application.

Claim 22 is rejected over claim 29 of '844 Patent in view of claim 1 of '6043 Application.

Claim 23 is rejected over claim 24 of '844 Patent.

Claim 24 is rejected over claim 16 of 16 of '844 Patent.

Claim 25 is rejected over claim 24 of '6043 Application.

Claim 26 is rejected over claim 24 of '6043 Application.

Claim 27 is rejected over claim 24 of '6043 Application.

Claim 28 is rejected over claim 18 of '6043 Application.

Claim 29 is rejected over claim 29 of '6043 Application.

Claim 30 is rejected over claim 30 of '844 Patent.

Claim 31 is rejected over claim 32 of '844 Patent.

Claim 32 is rejected over claim 1 of '844 Patent.

Claim 33 is rejected over claim 21 of '844 Patent.

Claim 34 is rejected over claim 19 of '844 Patent.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 6, 8-10, 14, 21, 25-26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921).

As to claims 1 and 21, Lewis shows a method and a system for processing information provided from at least one content provider comprising disparate systems and data sources (col. 4, lines 55-57) about the state of a plurality of objects (col. 4, lines 57-59), the states being subject to periodic updates (col. 3, lines 22-25) wherein a state of an object is interpreted as a time sensitive information related to an object, and for delivering formatted information indicating a current state of at least a portion of the plurality of objects (col. 4, lines 59-63) to a plurality of clients via a data communication network (col. 4, lines 63-65) in substantially real-time (col. 4, lines 50-53). Lewis shows

receiving raw data objects on at least one raw data stream input (col. 4, lines 55-56; col. 8, lines 54, 58-59; col. 9, lines 39-41), generating a formatted data object from a received raw data object (col. 4, lines 59-60; col. 8, lines 60-61; col. 9, lines 45-50), storing a current state of the formatted data object in an object storage pool comprising a database (col. 6, lines 39-41; col. 8, lines 61-65; col. 10, lines 10-14), and broadcasting the current state of the formatted data object on a particular broadcast data stream (col. 4, lines 63-67; col. 6, lines 41-43; col. 8, lines 65-67; col. 9, lines 1-7; col. 9, lines 54-60). Lewis also shows establishing communication sessions with a plurality of clients (col. 4, lines 63-65), connecting to at least one broadcast data stream (col. 9, lines 60-67), receiving on a connected broadcast data stream a current state for a specific data object comprising messages (col. 9, lines 60-67; col. 10, lines 55-62), and transmitting the current state of the specific data object to a set of clients from the plurality of clients (col. 8, lines 65-67; col. 9, lines 1-7).

Lewis does not show updating an object pool cache to reflect the current state of the specific data object.

Cohen shows updating an object pool cache to reflect the current state of the specific data object comprising updating proxy cache so that the cache has a valid (current) copy of the resource requested by a client (paragraph [0002], lines 28-45).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by having an object pool cache that is getting updated to reflect the current state of the specific data object in order to reduce the load on the object storage pool serving data and information distribution

requests by transmitting the current state of the specific data object to clients from an object pool cache that stores a copy of the current state of the requested data object.

As to claims 6 and 25, Lewis shows an offer processor comprising interface/transformation server (100) Fig. 4 configured to perform the step of determining an object type of the raw data object (col. 10, lines 34-42), and the step of applying a set of formatting rules to the received raw data object in accordance with the object type to generate the formatted data object (col. 10, lines 43-49; col. 6, lines 7-12).

As to claims 8 and 28, Lewis shows the step of determining an object type of the raw data object (col. 10, lines 34-42) and that the particular broadcast data stream is selected from a plurality of broadcast data streams according to the object type comprising listening for any messages of a type that is processed by one or more of the information servers (col. 10, lines 55-62).

As to claims 9 and 29, Lewis shows validating the contents of the raw data object (col. 10, lines 8-9; col. 17, lines 23-33) and upon a failed validation, preventing subsequent broadcast of the current state of the formatted data object data derived from the raw data object (col. 10, lines 62-67).

As to claims 10 and 30, Lewis shows that the raw data object comprises information related to a financial product offering (col. 4, lines 54-59).

As to claims 14 and 31, Lewis shows the step of, in response to a detection that a particular client has subscribed to a new broadcast data stream not in a set of connected broadcast data streams, connecting to the new broadcast data stream comprising allowing subscribers to designate the specific information that is to be

derived from each type of incoming transaction (col. 6, lines 7-11) and selecting from the Message Bus only those messages that are of interest to the listening component (col. 10, lines 65-67) and wherein users can introduce new services by modifying rule sets (col. 15, lines 7-28).

As to claim 26, Lewis shows a processing database having object typing and formatting rules stored therein comprising a table of stored transaction types (col. 10, line 38; col. 9, lines 25-32).

10. Claims 2-3, 5, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) and in further view of Williams, Jr. (Patent No.: 4,868,866).

As to claims 2 and 22, Lewis shows determining if a prior version of the formatted data object was present in the object storage pool comprising having business rules that define management of previously existing data (col. 10, lines 18-20). Lewis also shows determining a data differential between the prior version and the current state of the formatted data object comprising calculating the difference between the previous values and the new values (col. 14, lines 27-31).

Lewis does not explicitly show broadcasting the data differential on the particular broadcast data stream.

Williams shows determining a data differential between the prior version and the current state of the formatted data object and broadcasting the data differential on the particular broadcast data stream (abstract, lines 9-13).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by broadcasting the determined data differential on the particular broadcast data stream in order to reduce a load on the broadcast data distribution system in heavier than usual data volume situations (abstract, lines 9-10 in Williams).

As to claims 3 and 23, Lewis shows that each client has an associated user interface that dynamically configures itself to display data indicating data stream subscriptions comprising subset of the data and information that the user is subscribed for (col. 20, lines 5-21). Lewis also shows having at least one object rule comprising a business rule associated with the subscribed data stream (col. 6, lines 7-12; col. 15, lines 20-23). Lewis shows that the step of transmitting the current state of the specific data object to a set of clients comprises the steps of for each respective client subscribed to the particular input data stream, evaluating the object rules associated with the particular input data stream against the specific data object and transmitting the current state of the specific data object to the respective client in response to a positive evaluation comprising displaying to subscribing client only that subset of the data and information that the user is entitled to retrieve (col. 20, lines 5-21; col. 6, lines 7-28).

Lewis does not show that data indicating data stream subscriptions and at least one object rule associated with the subscribed data streams are contained in a profile associated with each client.

Williams shows that data indicating data stream subscriptions and at least one object rule comprising an entitlement message associated with the subscribed data streams are contained in a profile associated with each client (col. 10, lines 60-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by having data indicating data stream subscriptions and at least one object rule comprising an entitlement message associated with the subscribed data streams are contained in a profile associated with each client in order to allow changes to the information content in a profile performed without disturbing the underlying information server code (col. 9, lines 28-31 in Lewis).

As to claim 5, Lewis in view of Cohen shows all the elements except for the step of broadcasting the current state comprising broadcasting a corresponding sequence number associated with the current state.

Williams shows broadcasting a corresponding sequence number associated with the current state comprising associating a sequence number with each broadcasted real-time message (col. 6, lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis in view of Cohen by broadcasting a corresponding sequence number associated with the current state in order to identify and correct errors that might occur during the transmission more easily (col. 6, lines 5-8 in Williams).

11. Claims 4 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) and in further view of Wynblatt et al. (Patent No.: 6,645,421).

As to claims 4 and 24, Lewis shows having a plurality of Message Buses that can be deployed simultaneously.

Lewis does not show that the step of connecting to at least one broadcast data stream comprises the steps of connecting to a first data stream from a first information manager and connecting to a second data broadcast stream from a second information manager.

Wynblatt shows connecting to a first data stream from a first information manager comprising a first data stream server (11) and connecting to a second data broadcast stream comprising a second data stream server (11) from a second information manager (col. 1, lines 32-34).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify a method and system of Lewis by having a plurality of information managers and connecting to a first data stream from a first information manager and connecting to a second data broadcast stream from a second information manager in order to perform a load balancing by having plural information managers receiving incoming data messages from a plurality of source systems and broadcasting data streams (col. 8, lines 54-55 in Lewis).

12. Claims 7 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) and in further view of Nguyen et al. (Patent No.: 6,072,870).

As to claims 7 and 27, Lewis shows adding unique values that are used to create "primary-foreign key" relationships that interrelate pairs of data tables (col. 2, lines 28-33; col.12, lines 8-16).

Lewis does not explicitly show a translator performing the step of translating the raw data object into a raw event comprising at least one name-value pair prior to performing the steps of determining an object type of the raw data object and generating a formatted data object.

Nguyen shows an HTTPS server translating the raw data object into a raw event comprising at least one name-value pair comprising decrypting received message and parsing the message into name-value pairs (col. 62, lines 10-20) prior to performing the steps of determining an object type of the raw data object and generating a formatted data object comprising parsing the message based on determined message type and extended SET version information (col. 62, lines 20-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by having the step of translating the raw data object into a raw event comprising at least one name-value pair prior to performing the steps of determining an object type of the raw data object and generating a formatted data object and having the offer processor receiving the raw

event as input in order to facilitate navigation from table-to-table and maintain referential integrity among interrelated tables (col. 12, lines 12-14 in Lewis).

13. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) and in further view of Polcyn et al. (Patent No.: 5,878,418).

As to claim 11, Lewis in view of Cohen shows connecting to a particular broadcast data stream (col. 9, lines 60-67 in Lewis).

Lewis in view of Cohen does not show initializing the object pool cache with an initial state of data object carried on the particular broadcast data stream.

Polcyn shows initializing the object pool cache comprising a database with an initial state of data objects comprising initial states for the defined data elements (col. 9, lines 44-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis in view of Cohen by initializing the object pool cache with an initial state of data object carried on the particular broadcast data stream in order to create database structure, including data fields, and fill the object pool cache with some initial information (col. 9, lines 49-53 in Polcyn).

As to claim 12, Lewis shows the process of initially populating the database with data objects comprising market data (col. 16, lines 28-30).

Lewis does not explicitly show the step of obtaining the initial state of data objects from the information manager generating the particular broadcast data stream.

Polcyn shows obtaining the initial state of data objects from the information manager generating the particular broadcast data stream comprising data initialization (240) setting some initial state to the defined data elements in the newly created database structure corresponding to a new application loaded wherein the initial state of data objects are obtained by the newly created database from the data initialization (240) (col. 9, lines 44-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis by having the step of obtaining the initial state of data objects from the information manager generating the particular broadcast data stream in order to initialize the newly created database structure associated with a new broadcast data stream with the initial information (col. 9, lines 49-53 in Polcyn).

14. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) in view of Polcyn et al. (Patent No.: 5,878,418) and in further view of Balaraman et al. (Patent No.: 6,847,971).

As to claim 13, Lewis in view of Cohen and in view of Polcyn shows all the elements except for after establishing a communication session with a particular client, delivering to the particular client a snapshot of a set of data objects in the object pool cache which are carried on broadcast data streams to which the particular client is subscribed.

Balaraman shows that after establishing a communication session with a particular client (col. 9, lines 10-15), delivering to the particular client a snapshot of a set of data objects in the object pool cache comprising a database server (202) Fig. 2 which are carried on broadcast data streams to which the particular client is subscribed (col. 6, lines 37-41; col. 9, lines 50-56; Fig. 4)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis in view of Cohen and in view of Polcyn by delivering to the particular client a snapshot of a set of data objects in the object pool cache which are carried on broadcast data streams to which the particular client is subscribed in order to provide a subscribing client with a data that reflects the state of a set of data objects in the object pool cache at a particular point in time (col. 1, lines 57-60 in Balaraman).

As to claim 15, Lewis in view of Cohen shows all the elements except for initializing the object pool cache with an initial state of data object carried on the new input data stream, and delivering to the particular client a snapshot of a set of the data objects in the object pool cache associated with the new data stream.

Polcyn shows initializing the object pool cache comprising a database with an initial state of data objects comprising initial states for the defined data elements (col. 9, lines 44-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis in view of Cohen by initializing the object pool cache with an initial state of data object carried on the new input data stream in order to

create database structure, including data fields, and fill the object pool cache with some initial information (col. 9, lines 49-53 in Polcyn).

Balaraman shows delivering to the particular client a snapshot of a set of the data objects in the object pool cache comprising a database server (202) Fig. 2 associated with the new data stream (col. 6, lines 37-41; col. 9, lines 50-56; Fig. 4).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Lewis in view of Cohen and in view of Polcyn by delivering to the particular client a snapshot of a set of data objects in the object pool cache associated with the new data stream in order to provide a subscribing client with a data that reflects the state of a set of data objects in the object pool cache at a particular point in time (col. 1, lines 57-60 in Balaraman).

15. Claims 16, 19-20, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) and in further view of Arnold et al. (2007/0078978).

As to claims 16 and 32, Lewis in view of Cohen shows transmitting the current state of the particular data object to the respective client (col. 8, lines 65-67; col. 9, lines 1-7).

Lewis in view of Cohen does not show each connected client having a respective client event queue, placing a state event in the client event queue associated with the respective client, the state event indicating the current state of the particular

data object, and subsequently transmitting a client event derived from the queued event to the respective client.

Arnold shows a delivery manager comprising a client/server system (2400) wherein each connected client having a respective client event queue comprising message queue (2430) (paragraph [0157]), placing a state event in the client event queue associated with the respective client comprising sending data to clients (2410) using queue (paragraph [0157]), and subsequently transmitting a client event derived from the queued event to the respective client (paragraph [0157]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis by having each connected client having a respective client event queue, placing a state event in the client event queue associated with the respective client, the state event indicating the current state of the particular data object, and subsequently transmitting a client event derived from the queued event to the respective client in order to effectively deliver message data to a particular client in case when the client is not able to receive messages at the sending speed of the server.

As to claims 19 and 34, Lewis in view of Cohen shows all the elements except for monitoring the performance of communication with each connected client, and dynamically adjusting a rate at which the current state of the specific data is transmitted to each respective client in response to the monitored performance.

Arnold shows monitoring the performance of communication with each connected client comprising measuring the roundtrip time for packet transmission

(paragraph [0173], lines 7-10), and dynamically adjusting a rate at which the current state of the specific data is transmitted to each respective client in response to the monitored performance (paragraph [0173], lines 4-7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis in view of Cohen by monitoring the performance of communication with each connected client, and dynamically adjusting a rate at which the current state of the specific data is transmitted to each respective client in response to the monitored performance in order to substantially optimize communications between a client and a server (paragraph [0173], lines 6-7 in Arnold).

As to claim 20, Arnold shows that the step of monitoring the performance of communication with each connected client comprises determining network transmission time and a client processing time for received transmissions (paragraph [0173]).

16. Claims 17-18, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis (Patent No.: 6,513,019) in view of Cohen et al. (2004/0254921) in view of Arnold et al. (2007/0078978) and in further view of Liu et al. (Patent No.: 6,839,680).

As to claims 17 and 33, Lewis in view of Cohen in further view of Arnold shows all the elements except for identifying pending state events associated with a respective client which are related to a common data object, and aggregating the identified state events to thereby reduce the number of pending state events.

Liu shows identifying pending state events associated with a respective client which are related to a common data object comprising keeping track of which events

have not been retrieved (col. 28 lines 56-59) wherein an event record has a user identifier (902 Fig. 9) (col. 24, lines 7-27), and aggregating the identified state events to thereby reduce the number of pending state events (col. 33, lines 4-22, Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system of Lewis in view of Cohen in view of Arnold by identifying pending state events in the client event queue (2430 in Arnold) associated with a respective client which are related to a common data object, and aggregating the identified state events to thereby reduce the number of pending state events in order to allow all of the relevant information about the user's relevant information during the specified period of time to be easily accessed from a single data source (col. 33, lines 32-35 in Liu).

As to claim 18, Liu shows the identified state events are aggregated into at most one state event (col. 33, lines 19-22, Fig. 2 level 0).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oleg Survillo whose telephone number is 571-272-9691. The examiner can normally be reached on M-Th 7:30am - 5:00pm; F 7:30am - 4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Examiner: Oleg Survillo

Date: May 8, 2007

Phone: 571-272-9691

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER